2023-2024 Gr7 Science Benchmark Unit 1

Answer Key

Question 1. D - 2 Points

Standards

MS-PS3-3
Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.

Question 2.

Response 1: O - 2 Points

Response 2: O - 2 Points

Standards

MS-PS3-3
Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.

Question 3. A - 2 Points

Standards

MS-PS3-3
Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.

Question 4. A - 1 Point

Standards

MS-PS3-3
Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.

Question 5. D - 2 Points

Standards

MS-PS3-4
Plan an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample.

Question 6. D - 1 Point

Standards

MS-PS3-4
Plan an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample.

Question 7. A - 1 Point

Standards

MS-PS3-5
Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.

Question 8. motion - 1 Point

Standards

MS-PS3-5
Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.

Question 9. A - 1 Point

Standards

MS-PS1-1
Develop models to describe the atomic composition of simple molecules and extended structures.

Question 10. B;E - 2 Points

Standards

MS-PS1-1
Develop models to describe the atomic composition of simple molecules and extended structures.

Question 11. D - 1 Point

Standards

MS-PS1-1
Develop models to describe the atomic composition of simple molecules and extended structures.

Question 12. C - 1 Point

Standards

MS-PS1-1
Develop models to describe the atomic composition of simple molecules and extended structures.

Question 13. B - 1 Point

Standards

MS-PS1-4
Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.

Question 14. D - 1 Point

Standards

MS-PS1-4
Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.